

Public Works Academy of Seminole County

FOUNDATION COURSE MODULES (A)

➤ **Safety--First Aid (4 hours) / PDV 0100**

Course Description: This is a course designed to prepare an individual to recognize injuries and illnesses, and provide the immediate care needed before the arrival of advanced life to assume treatment. Properly applied first aid can save lives, and reduce recovery time, and quite possibly be the difference between temporary disability or lifelong disability for the victim.

Performance Objectives:

- Comply with academy policies and procedures.
- Identify the goals of the PWA.
- Demonstrate correct procedures for ASHI First Aid.
- Describe principles for "Right to Know".

Outline:

Introduction / Good Samaritan Information

- I. Emergency Response
 - A. When a medical emergency is encountered
- II. General Principles of Triage
 - A. Determine extent of injury or illness
 - B. Appropriate action and care
- III. Standard Precautions and BSI
 - A. Barriers
- IV. Examination of patient
 - A. Introduction and permission to provide care
 - B. Patient assessment
 - C. Head-to-toe assessment
- V. Bleeding Emergencies
 - A. Classifications of bleeding
 - B. The bleeding control sequence
 - C. Bandaging skills
 - D. Related Bleeding Emergencies
 - E. Shock
 - F. Burns
 - G. Inhalation injuries
 - H. Strains, contusions and sprains
 - I. Dislocations and fractures
 - J. Head, neck and spinal injuries
 - K. Medical emergencies
 - L. Heat and cold related emergencies
 - M. Specific body injuries and care

➤ **Ethics & Employability Skills (4 hours) / PDV 0101**

Course Description: This course is designed to provide participants with a clear understanding of appropriate workplace attitudes and skills that facilitate the success of any company or organization. The importance of workplace ethics and related behavior is also reviewed. Further, stress management skills to increase professional success are discussed.

Performance Objectives:

- Identify acceptable work habits.
- Demonstrate acceptable employee health habits.
- Follow written and oral instructions.
- Interact professionally with employer and employees (internal customers).
- Interact professionally with customers and clients (external customers).
- Demonstrate loyalty to the training station.
- Demonstrate knowledge of how to make internal job changes appropriately.

Outline:

- I. Introduction
 - A. Professional attributes I bring to the workplace

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- B. Meeting basic customer needs through workplace attitude and behaviors
- II. Attitude in the Workplace
 - A. Positive and negative attitudes in past work experiences
 - B. Positive workplace behaviors
 - C. "If I Was the Boss"—workplace scenario discussion
- III. Professionalism and Employability Skills
 - A. Importance of professional image
 - B. ASTD employer survey
 - C. Working efficiently
- IV. Ethics
 - A. Defining ethics
 - B. Common ethical problems in the workplace
 - C. "What Would You DO?"—workplace scenario discussion
 - D. Guidelines for making ethical decisions in the workplace
- V. Stress Management
 - A. The relationship of effective stress management skills to work success
 - B. Managing change effectively
 - C. Positive coping strategies
- VI. Conclusion
 - A. Building and maintaining a professional image
 - B. Video: Words of Encouragement

➤ Blueprint Reading (6 hours) / PDV 0102

Course Description: This course is a study of the principles involved in the use and interpretation of drawings and specifications commonly used in roadway plans. Topics include architectural and structural details, materials, structural, mechanical and electrical systems and related building code requirements.

Performance Objectives:

- Explain what drawings are.
- Explain why drawings are important in the construction industry.
- Identify what is included in a set of drawings.
- Describe how prints are made.
- Read both English (customary) and metric rules and tapes.
- Convert between English and metric units.
- Identify features from different lines.
- Match drawing symbols with their meanings.
- Recognize pictorial drawings.
- Scale and read dimensions from a print.
- Identify symbols representing materials on a drawing.
- Explain what is included in specifications.
- Recognize common features of plot plans.
- Identify various components of a foundation system.
- Recognize plumbing fixture symbols and HVAC symbols.
- Recognize different types of electrical drawings.

Outline:

- I. Definition of standard terms, symbols and layout.
- II. Content and organization of contract plans and specifications used by local agencies.
- III. Hands-on understanding of Roadway Construction Plans by reviewing the process from project inception through survey, design, and construction.
- IV. Review the basic types of plan sheets including Plan & Profile, Cross Section, Drainage Detail, Utility Adjustment, Signalization, Signing & Striping.
- V. Correlation between roadway plans and other plans used for construction of Water and Wastewater infrastructure.

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➤ **PC Basics-- Computer Skills (8 hours) / PDV 0103**

Course Description: Participants will learn basic computer concepts and skills related to the operation of a computer system. They will receive a thorough introduction to hardware components, the Windows environment and become acquainted with software applications.

Performance Objectives:

- Identify and understand the function of each component of the system.
- Understand the overall integration between software and hardware.
- Understand the concept of software.
- Know the different types of software available to you.
- Understand the concepts of the generation of hardware and software.
- Understand how the computer can make work easier, more efficient and effective.

Outline:

- I. Computer System Hardware:
 1. Main Components of Computer Hardware
 2. Central Processing Unit
 3. Using Disks for Permanent Memory
 4. Input/Output Devices
- II. Computer System Software:
 1. Types of Software
 2. Operating System
 3. Applications
 4. Network
- III. Windows Operating System:
 1. The Windows Environment
 2. Using the Mouse
 3. Parts of a Window
 4. Moving and Sizing a Window
 5. Running a Program
 6. Working in Multiple Applications
 7. Minimizing, Maximizing and Closing Windows
- IV. Applications:
 1. Introduction to Text Editing
 2. Introduction to Word Processing
 3. Introduction to Paint
 4. Saving, Printing and Retrieving a Document
- V. Internet Explorer/Netscape:
 1. Working with the Internet
 2. Understanding E-Mail
 3. Going to different Web Sites

➤ **Basic Math Skills (8 hours) / PDV 0104**

Course Description: This course is intended to be a refresher course for basic mathematics. The course will include the following topics: whole numbers; decimals; fractions; percentages; integers; exponents; ratios; proportion and measurements; applied math for finding the perimeter, area or volume of specific geometric figures; and plotting coordinates on graphs.

Performance Objectives:

- Add, subtract, multiply, and divide decimals.
- Express in lowest terms, add, subtract, multiply, and divide rational numbers and rational expressions.
- Convert fractions/decimals/percents.
- Solve percent problems for the percent, base, or percentage.
- Apply the basic number properties.
- Apply the laws of integer exponents including scientific notation.
- Plot points on the rectangular coordinate system.
- Graph linear equations and inequalities with two variables.

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- Determine the slope of a line.
- Recognize parallelograms, trapezoids, squares, rectangles, triangles, and circles and compute their perimeter and area.
- Recognize rectangular solids and compute the volumes of rectangular solids, cubes, right circular cylinders, cones, and pyramids.
- Distinguish between linear, square, and cubic units of measure.

Outline:

- I. Whole Numbers
 - A. Adding
 - B. Subtracting
 - C. Multiplying
 - D. Dividing
 - E. Prime, power, roots and order of operation
- II. Adding and Subtracting fractions
 - A. Fractions with like denominators
 - B. Finding common multiples
 - C. Adding and subtracting mixed numbers
 - D. Comparing fractions
- III. Multiplying and Dividing fractions
 - A. Naming fractions
 - B. Multiplying
 - C. Dividing
 - D. Multiplying and dividing mixed numbers
- IV. Decimals
 - A. Decimal notations
 - B. Converting between fraction and decimal
 - C. Rounding decimals
 - D. Adding and subtracting decimals
 - E. Multiplying decimals
 - F. Dividing decimals
 - G. Comparing decimals
- V. Percentages
 - A. Meaning of percent and changing fractions to a percent
 - B. Solving for percent
 - C. Solving for whole
 - D. Solving for part
- VI. Ratio and Proportions
 - A. Systems of measurements
 - B. Numbers for measurement conversions
- VII. Integers
 - A. Adding integers
 - B. Subtracting integers
 - C. Multiplying and dividing integers
- VIII. Geometry
 - A. Recognizing segments and lines
 - B. Identifying angles
 - C. Finding perimeter of an angle, parallelogram, square and rectangle
 - D. Radius and circumference
 - E. Volume and area

➤ **Utility Locates (3 hours) / PDV 0105**

Course Description: This course will provide an overview of the "Sunshine State One Call of Florida" (FI Statute 556) locates program and contain a "hands-on" component that will demonstrate the equipment and techniques used to locate underground utilities. This course will provide answers to the questions: Who will call for the locate; What must be located; When is a locate required; and Why is a locate required?

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Performance Objectives:

- Identify APWA-ULCC Utility locating Color Codes
- Explain what the Sunshine One Call is, why it is, and what are its responsibilities
- Demonstrate an understanding of State and Federal laws that govern utility locates.
- Describe the types of locates:
 - 1) Direct
 - 2) Indirect
 - 3) Physical (including soft dig)
 - 4) Magnetometer
 - 5) Divining

Outline:

- I. What is Sunshine State One Call of Florida (SCCOCOF)?
- II. Excavator's Responsibilities
 - A. Scheduled excavation
 - B. Emergency excavation
 - C. Error correction
 - D. Safe digging
- III. Member Operator's Responsibilities
 - A. Responding to a ticket
 - B. Guidelines for marking underground facilities
- IV. Equipment overview and hands-on demonstration

➤ Basic Customer Service Skills (4 hours) / PDV 0106

Course Description: This course will provide participants with the basic concepts of customer service, what the customer expects and how to meet those needs.

Performance Objectives:

- Learn the keys to a positive business image.
- Express positive communication skills.
- Model effective listening skills.
- Identify the four emotional states of customers.
- Distinguish between internal vs. external customers.
- Integrate a team approach to customer service.

Outline:

- I. Introduction
- II. Positive Attitude
- III. Communication
- IV. Listening
- V. Feedback
- VI. Customer Needs
- VII. Internal And External Customers
- VIII. Team Effort

➤ Basic Operator & Equipment Maintenance (4 hours) / PDV 0107

Course Description: The purpose of this course is to provide: basic information on the proper use of tools and equipment; safety in handling and disposing of hazardous materials; knowledge and skills to service and maintain vehicles and equipment; and to provide a safe working environment for all employees.

Performance Objectives:

- Demonstrate knowledge of the basic principles involved in creating and maintaining a safe working environment.
- Develop an understanding of the safe operating principles of light and heavy duty equipment.
- Develop basic skills in servicing and maintaining equipment.

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- Demonstrate knowledge of the appropriate procedures used in handling, storing and disposing of hazardous materials.

Outline:

- I. Personal Safety
- II. General Safety
- III. Petroleum products
- IV. Emergency procedures
- V. Equipment/vehicle tools
- VI. Working in groups
- VII. Identify unsafe equipment
- VIII. Identify unsafe environment
- IX. Creating a safe environment

➤ Grammar—Nuts & Bolts (4 hours) / PDV 0108

Course Description: This course focuses on an intensive review of basic grammar and sentence structure.

Performance Objectives:

- Understand and apply basic sentence structure (subjects, verbs, subject/verb agreement)
- Understand and apply modifiers in a sentence (adjectives, adverbs, direct and indirect objects)
- Understand and apply the mechanics of grammar (punctuation, capitalization)

Outline:

- I. The Bolts:
 1. The Basic Sentence:
 2. Recognizing Verbs
 3. Recognizing Subjects
 4. Subject Verb Agreement
 5. Tense Usage
- II. The Nuts:
 1. Adjectives
 2. Adverbs
 3. Direct Objects
 4. Indirect Objects
- III. Mechanics of Grammar:
 1. Punctuation
 2. Capitalization

➤ Business Communication—"Write Stuff" (4 hours) / PDV 0109

Course Description: This course will provide participants with the basic business correspondence structure and formats to include letters and memos.

Performance Objectives:

- Understand and apply the writing process (identify purpose, identify target audience, gather information, use logical order)
- Understand and apply business writing concepts (writing a paragraph, writing a memo, writing a business letter, proofing and editing the business document)

Outline:

- I. Understand and Apply the Writing Process:
 1. Identify the purpose
 2. Identify target audience
 3. Gather information
 4. Use logical order
- II. Understand and Apply Business Writing Concepts:
 1. Writing a paragraph
 2. Writing a memo
 3. Writing a business letter

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4. Proofing and editing the business document